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(54) Title: TRANSGENIC PROTHROMBIN AND RELATED THROMBIN PRECURSORS AND TRANSGENICS, METHODS, COMPOSITIONS, USES AND THE LIKE RELATING THERETO

(57) Abstract: The invention provides, among other things, activatable prothrombin, compositions comprising prothrombin, transgenic organisms for making prothrombin, methods for making the transgenic organisms, methods for making prothrombin-comprising compositions and for further purifying prothrombin from the compositions. Illustrative embodiments of the invention particularly provide transgenic mammals that express an exogenous gene for prothrombin and excrete the prothrombin encoded by the gene into their milk. In a highly particular illustrative embodiment in this regard the invention provides transgenic female pigs that express prothrombin in their milk. In this regard, the invention relates particularly to female pigs having stably incorporated in their genomes a DNA comprising a region that encodes prothrombin operably linked to a mammary gland-specific promoter. Further in this regard the invention relates to the milk containing the prothrombin and to prothrombin-containing compositions derived from the milk. It also relates to novel prothrombins obtained by expression of prothrombin genes in transgenic organisms and to uses, therapeutic and otherwise, of the prothrombins.